

Appl. No. 10/711,036
Amdt. dated November 11, 2005
Reply to Office action of August 17, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

5 **Listing of Claims:**

Claim 1 (currently amended): A substrate isolation design, comprising:

a P substrate;

a P well positioned on the substrate;

at least a device positioned in the P well; [[and]]

10 at least a P substrate guard ring surrounding the device; and [[,]]
wherein—

an N well guard ring [[is]] positioned between the device and the P
substrate guard ring,

15 wherein the P substrate guard ring is positioned beneath a shallow
isolation trench formed within the P well.

Claim 2 (cancelled)

20 Claim 3 (original): The substrate isolation design of claim 1, further
comprising at least a P+ guard ring surrounding the device.

Claim 4 (original): The substrate isolation design of claim 3, wherein the
P+ guard ring is between the device and the P substrate guard ring.

25 Claim 5 (currently amended): The substrate isolation design of claim 4,
~~further comprising at least~~ wherein the N well guard ring is positioned
between the P+ guard ring and the P substrate guard ring.

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Claim 6 (original): The substrate isolation design of claim 5, further comprising at least a deep N well guard ring positioned beneath the P well to contact to the N well guard ring.

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Claim 7 (currently amended): The substrate isolation design of claim 1, ~~further comprising an~~ wherein the N well guard ring surrounding surrounds the device.

10 Claim 8 (original): The substrate isolation design of claim 7, wherein the N well guard ring is between the device and the P substrate guard ring.

15 Claim 9 (original): The substrate isolation design of claim 8, further comprising at least a deep N well guard ring positioned beneath the P well to contact to the N well guard ring.

Claim 10 (currently amended): A substrate isolation design, comprising:

20 a substrate;
at least a device positioned on the substrate;
a first guard ring surrounding the device;
a second guard ring surrounding the first guard ring; and
a third guard ring surrounding the second guard ring, the third guard ring being a substrate guard ring, wherein the second guard ring comprises an N well guard ring and the substrate
25 guard ring is positioned beneath a shallow isolation trench.

Claim 11 (original): The substrate isolation design of claim 10, wherein the first guard ring comprises a P+ guard ring.

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Claim 12 (cancelled)

Claim 13 (original): The substrate isolation design of claim 10, wherein the
5 third guard ring comprises a P substrate guard ring.

Claim 14 (cancelled)

Claim 15 (original): The substrate isolation design of claim 10, further
10 comprising at least a deep N well guard ring connecting to the N well guard
ring.

Claim 16 (currently amended): A substrate isolation design, comprising:
a P substrate;
15 at least a device positioned in the substrate; [[and]]
at least a P substrate guard ring surrounding the device; and [[,]]
~~wherein~~
an N well guard ring [[is]] positioned between the device and the P
substrate guard ring,
20 wherein the P substrate guard ring is positioned beneath a shallow
isolation trench.

Claim 17 (cancelled)

25 Claim 18 (original): The substrate isolation design of claim 16, further
comprising at least a P+ guard ring positioned between the device and the P
substrate guard ring.

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Claim 19 (currently amended): The substrate isolation design of claim 18,
~~further comprising at least an~~ wherein the N well guard ring is between the
P+ guard ring and the P substrate guard ring.

- 5 Claim 20 (original): The substrate isolation design of claim 19, further
comprising at least a deep N well guard ring contacting to the N well guard
ring.

Claim 21 (cancelled)

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Claim 22 (currently amended): The substrate isolation design of claim
[[21]] 16, further comprising at least a deep N well guard ring contacting to
the N well guard ring.

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